G-SPEED™ eS PRO Mac Installation Guide

(with G-Tech PCIe RAID controller)

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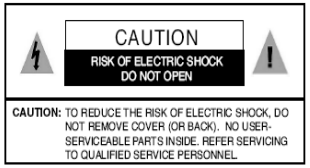
P/N G-SPEED eS PRO v1.2 (11/11)

IMPORTANT SAFEGUARDS


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the product enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating maintenance (servicing) instructions literature accompanying the appliance.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE APPLIANCE TO RAIN OR MOISTURE.

1. READ INSTRUCTIONS
   All the safety and operating instructions should be read before the unit is operated.
2. RETAIN INSTRUCTIONS
   The safety and operating instructions should be retained for future reference.
3. HEED WARNINGS
   All Warnings on the unit and in the operating instructions should be adhered to.
4. FOLLOW INSTRUCTIONS
   All operating and use instructions should be followed.
5. ATTACHMENTS
   Do not use attachments not recommended by the unit's manufacturer as they may cause hazards.
6. WATER AND MOISTURE
   Do not use this unit near water–for example, near a bathtub, washbowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
7. ACCESSORIES
   Do not place this unit on an unstable cart, stand, tripod, bracket or table. The unit may fall, causing serious injury and serious damage to the unit.
8. VENTILATION
   Openings in the front and back of the unit are provided for ventilation to ensure reliable operation and to protect it from over heating. These openings must not be blocked or covered. This unit should never be placed near or over a radiator or heat source. This unit should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided.
9. POWER SOURCES
   This unit should be operated only from the type of power source indicated on the rating label. If you are not sure of the type of power supply in your facility, consult your local dealer or power company.
10. GROUNDING AND POLARIZATION
    This equipment is supplied with a power cord with a US style 3-wire grounding type plug at one end and a 3-wire IEC standard connector at the other. The 3-wire grounding type plug will fit into a US style grounding type power outlet and the IEC connector is intended to plug into the Medéa unit. The 3-wire grounding type plug is a safety feature. If you are unable to insert the plug into the outlet, do not force it. Contact your electrician to replace the obsolete outlet. DO NOT DEFEAT THE SAFETY PURPOSE OF THE GROUNDING TYPE PLUG. For use in Foreign Countries, contact your local Medéa dealer or representative to obtain a power cord with a locally compatible 3-wire grounding plug on one end and a 3-wire IEC standard connector on the other.
11. POWER-CORD PROTECTION
    Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles and the point where they exit the unit.
12. SERVICING
    Do not attempt to service this unit yourself as opening or removing covers may expose you to dangerous voltages or other hazards. (See Caution Symbol at rear of power supply chasis.) Refer all servicing to qualified service personnel.

WICHTIGE SICHERHEITSHINWEISE

WARNUNG
Gefahr eines elektrischen
Schlages Nicht öffnen
WARNUNG: Um die Gefahr eines elektrischen Schlages zu verringern sollten Sie niemals eine Verkleidung oder Abdeckung entfernen. Keines der enthaltenen Teile kann selbst gewartet werden. Überlassen Sie dies qualifiziertem Servicepersonal.

Dieses Symbol soll den Benutzer darauf aufmerksam machen, dass er hier unisolierte gefährliche Spannung innerhalb des Gehäuses antrifft, die ausreichend gefährlich ist um einen Stromschlag hervorzurufen.

Dieses Symbol ist gedacht um den Anwender darauf hinzuweisen, dass sich im Handbuch wichtige Hinweise befinden.

WARNUNG: UM DIE GEFAHR EINES ELEKTRISCHEN SCHLAGES ZU VERRINGERN, DARF DAS GERÄT WEDER REGEN NOCH FEUCHTIGKEIT AUSGESETZT WERDEN.

1. LESEN SIE DIE HINWEISE
   Lesen Sie bitte alle Sicherheitshinweise und die Bedienungsanleitung bevor Sie das Gerät in Betrieb nehmen.
2. AUFBEWAHREN DER HINWEISE
   Bewahren Sie die Bedienungsanleitung und alle Sicherheitshinweise für spätere Verwendung auf.
3. BEACHTEN SIE DIE WARNUNGEN
   Alle Warnungen and Hinweise auf dem Gehäuse und in der Anleitung sollten unter allen Umständen beachtet werden.
4. FOLGEN SIE DEN ANWEISUNGEN
   Alle Benutzer -und Bedienungsanweisungen sollten befolgt werden.
5. ERWEITERUNGEN
   Benutzen Sie keine Erweiterungen, die nicht vom Hersteller empfohlen wurden um Gefahren zu vermeiden.
6. WASSER UND FEUCHTIGKEIT
   Benutzen Sie das Gerät nicht in der Nähe von Wasser–z.B. Badewanne, Waschschüssel, Spüle, Waschwanne, feuchter Fußboden oder in der nähe eines Pools.
7. ZUBEHÖR
   Stellen Sie das Gerät nicht auf einen wackeligen Rollcontainer, Ständer, Stativ, Regal oder Tisch. Das Gerät könnte herunterfallen, was einen bleibenden bzw. irreparablen Schaden an dem Gerät hervorrufen könnte.
8. BELÜFTUNG
   Öffnungen an der Vor- und Rückseite des Gerätes sind für die Belüftung vorgesehen, um eine zuverlässige Funktion zu garantieren und gegen Überhitzung vorzubeugen. Diese Öffnungen dürfen weder verstellt noch zugedeckt werden. Das Gerät sollte niemals in der Nähe einer Heizung oder einer anderen Wärmequelle aufgestellt werden. Das Gerät sollte außerdem nicht in einem Einbaugehäuse wie einem Schrank, oder einem Rack installiert werden, solange eine ausreichende Belüftung nicht sichergestellt ist.
9. NETZANSCHLUß (STROMVERSORGUNG)
   Das Gerät sollte nur mit der Spannungsversorgung, die auf dem Geräteaufkleber ausgewiesen ist, betrieben werden. Sollten Sie nicht sicher sein, welche Art der Spannungsversorgung in Ihrem Betrieb ver wendet wird, fragen Sie bei Ihrem Händler oder der Stromversorgungsgesellschaft nach.
10. ERDUNG UND POLUNG
    Zur Ausstattung gehört ein Stromkabel mit einem amerikanischen Schutzkontakt Stecker mit Erdung auf der einen Seite und einem Kaltgeräte Stecker auf der anderen (IEC Standard). Der Schutzkontaktstecker passt in eine amerikanische Schutzkontaktsteckdose und de Kaltgerätestecker in ihr Medea Gerät. Der Schutzkontaktstecker ist eine Sicherheitseinrichtung. Sollten Sie ihn nicht ich Ihre Steckdose stecken können, wenden Sie keine Gewalt an. Setzen Sie sich mit Ihrem Elektriker in Verbindung um die Steckdose auszuwechseln. Zerstören Sie unter keinen Umständen die Sicherheitseinrichtung an Ihrem Stecker. Zur Anwendung in anderen Ländern setzen Sie sich mit Ihrem Medea Händler in Verbindung, der Ihnen ein Landesübliches Stromkabel mit einem Schutzkontaktstecker auf der einen und einem Kaltgerätestecker auf der anderen Seite zur Verfügung stellt.
11. STROMKABEL ISOLIERUNG
    Stromkabel sollten so gelegt werden, dass man nicht auf sie tritt, oder Geganstände auf ihnen stehen bzw. gegen sie stoßen. Besondere Aufmerksamkeit sollte Leitungen und Steckern, sowie Kupplungen und die Stelle an der sie das Gerät verlassen, gewidment werden.
12. SERVICE
    Versuchen Sie keinesfalls das Gerät selbständig zu warten, oder das Gehäuse zu öffnen. Dies kann Sie gefährlicher Spannung oder andern Gefahren aussetzen. Überlassen sie alle Wartungsarbeiten qualifiziertem Service Personal.

MEDIDAS PREVENTIVAS IMPORTANTES

PRECAUCIÓN
RIESGO DE DESCARGA ELÉCTRICA
NO ABRIR
PRECAUCIÓN: PARA REDUCIR EL RIESGO DE DESCARGA ELÉCTRICA, NO RETIRE LA CUBIERTA (O CUBIERTA POSTERIOR). NO HAY ADENTRO PARTES REPARABLES POR EL USUARIO. PERMITA QUE EL SERVICIO LO REALICE PERSONAL DE SERVICIO CALIFICADO.

El símbolo del rayo con flecha dentro de un triángulo equilátero tiene por objeto alertar al usuario de la presencia de voltaje peligroso y sin aislamiento en el interior del producto que pudiera ser de la suficiente magnitud como para constituir el riesgo de recibir una descarga eléctrica.

El símbolo de el signo de exclamación dentro de un triángulo equilátero tiene por objeto alertar al usuario de la existencia de instrucciones importantes para la operación y mantenimiento (servicios) en los documentos que acompañan el equipo.

ADVERTENCIA: PARA PREVENIR LA POSIBILIDAD DE PROVOCAR UN INCENDIO O DE RECIBIR UNA DESCARGA ELÉCTRICA, NO EXPONGA ESTE SISTEMA A LA LLUVIA O HUMEDAD.

1. LEA LAS INSTRUCCIONES
   Deberá leer todas las instrucciones sobre seguridad y operación antes de operar la unidad.
2. GUARDAR LAS INSTRUCCIONES
   Deberá guardar las instrucciones sobre seguridad y operación para refer encia futura.
3. PRESTE ATENCIÓN A ADVERTENCIAS
   Deberá cumplir con todas las Advertencias indicadas en la unidad o en las instrucciones de operación.
4. SIGA LAS INSTRUCCIONES
   Deberá seguir todas las instrucciones sobre operación y uso.
5. ACCESORIOS
   No utilice accesorios que no hayan sido recomendados por el fabricante de la unidad en virtud de que pueden crear un peligro.
6. AGUA Y HUMEDAD
   No utilice esta unidad cerca de agua—por ejemplo, cerca de una tina, lavabo, fregadero o tinaco, en un sótano mojado o cerca de una piscina.
7. EQUIPO AUXILIAR
   No coloque esta unidad sobre carritos, bases, trípodes, soportes o mesas inestables. La unidad se podrá caer, causando lesiones graves y daños severos a la unidad.
8. VENTILACIÓN
   Aberturas al frente y en la parte posterior de la unidad se proporcionan para ventilación y para asegurar una operación estable, así como para proteger a la unidad de sobrecalentamiento. Estas aberturas no deberán ser obstruidas o cubiertas. Esta unidad nunca se deberá de colocar cerca o encima de un radiador o fuente de calor. Esta unidad no se deberá de colocar en muebles construidos a la medida, tales como libreros o estantes, salvo que se proporcione ventilación adecuada.
9. FUENTES DE ENERGÍA
   La unidad deberá operar únicamente a partir del tipo de fuente de energía indicada en la etiqueta correspondiente. Si no está seguro del tipo de fuente de energía en su edificio, consulte a su distribuidor local o compañía de suministro de energía eléctrica.
10. PUESTA A TIERRA Y POLARIZACIÓN
    El equipo se entrega con un cable alimentador con un enchufe con puesta a tierra de 3 alambres en un extremo y un enchufe estándar IEC (Comité Electrotécnico Internacional) de tres alambres en el otro. El enchufe con puesta a tierra de 3 alambres se conecta a un tomacorri ente con puesta a tierra y el conector IEC tiene por objeto enchufarse a una unidad Medea. El enchufe con puesta a tierra de 3 alambres es una medida de seguridad. Si no le es posible conectar el enchufe a un tomacorriente, no lo fuerce. Póngase en contacto con un electricista para sustituir el tomacorriente obsoleto. NO FRUSTRE LA MEDIDA DE SEGURIDAD INCORPORADA POR EL ENCHUFE CON PUESTA A TIERRA. Para uso en países extranjeros, póngase en contacto con su distribuidor local de Medea o su representante para obtener un cable alimentador con un enchufe con puesta a tierra de 3 alambres en un extremo y un enchufe estándar IEC de tres alambres en el otro compatible en su país.
11. PROTECCIÓN DEL CABLE ALIMENTADOR
    Los cables alimentadores se deberán de colocar de manera que se evite que sean pisados o pellizcados por algún equipo o mueble puestos encima de ellos o contra ellos, poniendo especial atención al enchufe del cable alimentador, receptáculos de protección o el punto en que se conectan a la unidad.
12. SERVCIOS
    No intente dar servicio a esta unidad por sí mismo en virtud de que abrir la unidad o retirar alguna cubierta lo puede exponer a voltajes peli grosos u otros riesgos. Permita que el servicio lo realice personal de servicio calificado.

MISES EN GARDE IMPORTANTES

ATTENTION
RISQUE DE CHOC ÉLECTRIQUE
NE PAS OUVRIR
ATTENTION: AFIN DE PRÉVENIR LES RISQUES D'ÉLECTROCUTION, NE PAS ENLEVER LE COUVERCLE (NI LE PANNEAU ARRIÈRE) DE L'APPAREIL. AUCUNE PIÈCE INTÉRIEURE NE PEUT ÊTRE RÉPARÉE PAR L'UTILISATEUR. POUR TOUTE RÉPARATION, CONSULTER UN TECHNICIEN COMPÉTENT.

Le symbole d'éclair dans un triangle équilatéral indique la présence d'une tension suffisamment élevée pour engendrer un risque de chocs électriques.

Le point d'exclamation dans un triangle équilatéral indique que le manuel d'utilisation inclus avec l'appareil contient d'importantes recommandations quant au fonctionnement et à l'entretien de ce dernier.

MISE EN GARDE: AFIN DE PRÉVENIR TOUT RISQUE D'INCENDIE OU D'ÉLECTROCUTION, NE PAS EXPOSER L'APPAREIL À LA PLUIE NI À L'HUMIDITÉ.

1. LIRE LES DIRECTIVES
   Lire toutes les directives concernant la sécurité et le fonctionnement de l'appareil avant de l'utiliser.
2. CONSERVER LES DIRECTIVES
   Conserver les directives concernant la sécurité et le fonctionnement de l'appareil pour référence ultérieure.
3. RESPECTER LES MISES EN GARDE
   Respecter toutes les mises en garde sur l'appareil et dans le manuel d'utilisation.
4. SUIVRE LES DIRECTIVES
   Suivre toutes les directives concernant le fonctionnement et l'utilisation de l'appareil.
5. ACCESSOIRES
   Ne pas utiliser d'accessoires non recommandés par le fabricant de l'appareil, car ils peuvent représenter un danger.
6. EAU ET HUMIDITÉ
   Ne pas utiliser l'appareil dans un endroit où il risque d'être mouillé, notamment dans un sous-sol humide et à proximité d'une baignoire, d'un lavabo, d'un évier, d'une cuve à lessive ou d'une piscine.
7. BAIES ET SUPPORTS
   Ne pas placer l'appareil dans une baie ou sur un support, un trépied, une console ou une table instable. L'appareil pourrait tomber et subir des dommages importants ou infliger de graves blessures.
8. AÉRATION
   Le boîtier de l'appareil comporte des fentes d'aération à l'avant et à l'arrière pour assurer le bon fonctionnement de l'appareil et le protéger de la surchauffe. Ces fentes ne doivent pas être obstruées ni recouvertes. Éloigner l'appareil de toute source de chaleur telle les radiateurs et autres éléments de chauffage. Ne pas placer l'appareil dans un meuble encastré tel une bibliothèque ou un bâti qui ne procure pas une aération adéquate.
9. ALIMENTATION
   Ne brancher l'appareil que dans une prise de courant du type décrit sur l'étiquette signalétique. En cas de doute sur le type d'alimentation disponible, consulter la compagnie d'électricité ou le distributeur local.
10. MISE À LA TERRE ET POLARISATION
    Le cordon d'alimentation fourni avec l'appareil est doté d'une fiche polarisée à trois branch es de style américain à une extrémité et d'un connecteur femelle CEI standard à l'autre extrémité. La fiche polarisée à trois branches peut être branchée dans une prise de courant polarisée de style américain et le connecteur CEI doit être rac cordé à l'appareil Medea. La fiche polarisée à trois branches constitue une mesure de sécurité. Si elle ne s'insère pas aisément dans la prise, ne pas la forcer. Contacter un électricien pour remplacer la prise désuète. NE PAS TENTER DE CONTOURNER CETTE MESURE DE SÉCURITÉ. Pour utiliser l'appareil à l'étranger, se procurer un cordon d'alimentation compatible avec la configuration électrique locale auprès du distributeur ou du représentant Medea local.
11. PROTECTION DU CORDON D'ALIMENTATION
    Les cordons d'alimentation doivent être placés de manière qu'ils ne soient pas piétinés ou écrasés par des objets et une attention particulière doit être portée à la fiche, à la prise et au point de sortie de l'appareil.
12. RÉPARATION
    Ne pas tenter de réparer l'appareil, car l'ouverture ou le retrait du boîtier peut vous exposer à des tensions dangereuses ou à d'autres risques. Confier toute réparation à un technicien qualifié.

G-SPEED eS PRO INSTALLATION GUIDE (for use with G-Tech RAID controller)

1. INTRODUCTION

Thank you for purchasing G-SPEED eS PRO from G-Technology by Hitachi! Specifically designed for professional content creation applications, G-SPEED eS PRO features a high-speed mini-SAS interface and provides RAID 0, 1, 3, 5, RAID 6 and JBOD functionality when used in conjunction with the G-Tech PCI Express (PCIe) mini-SAS RAID controller. Two G-SPEED eS PRO units can be attached to the G-Tech RAID controller for storage capacities to 8 TB and data rates over 600 MB/sec. G-SPEED eS PRO supports multi-stream video editing workflows on Mac PRO workstations.

If you purchased G-SPEED eS PRO with the G-Tech PCIe RAID controller before November 2011, the system has been set up at the factory for use with the G-Tech PCIe RAID controller in RAID 0 mode. The controller also supports RAID 1, 3, 5, 6 and JBOD modes. Refer to Section 10 if you wish to change the mode of operation.

2. SAFETY PRECAUTIONS

The disk drives contained in your G-SPEED eS PRO are delicate electronic instruments and are susceptible to damage due to excessive physical shock. Place the unit in a vented area away from moisture or liquids. Please handle the unit with care. Do not open the case. Doing so will void the warranty. *If the Product is returned with damage caused by improper handling, the warranty will be void and liability will rest with the user.*

3. SYSTEM REQUIREMENTS

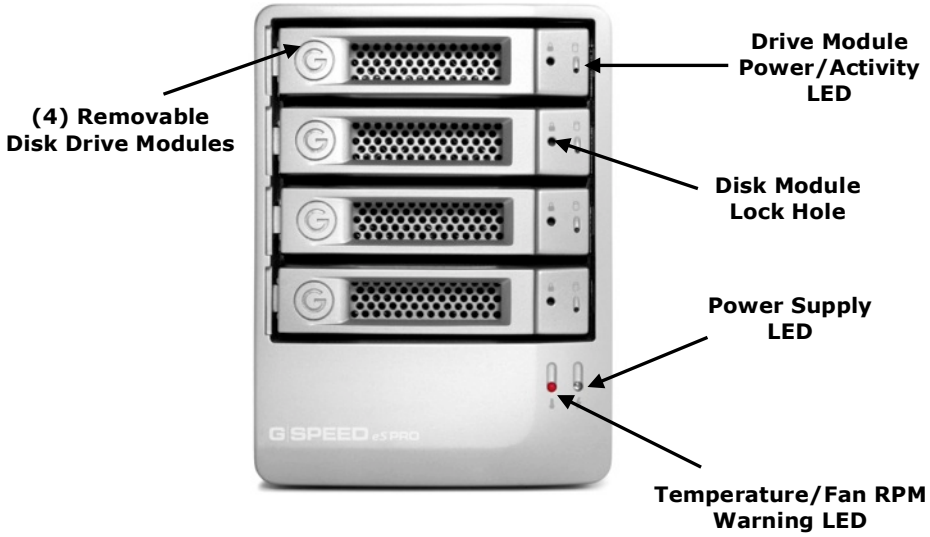
- Apple Mac PRO (Intel Mac) workstation
- Mac OS X 10.4.x or higher
- G-Tech PCIe x8 mini-SAS RAID Controller

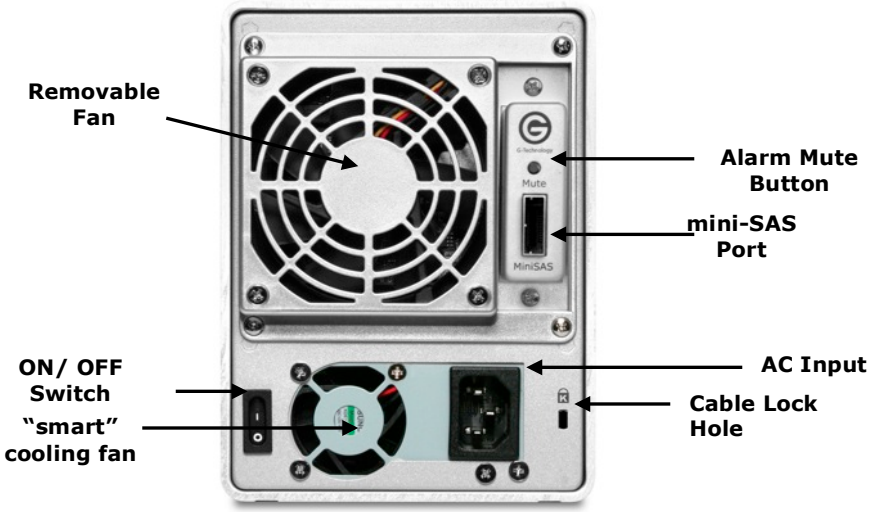
4. WHAT'S IN THE BOX

Take a moment to ensure that the following items are included in the box. If anything is missing, please call G-Tech at (310) 449-4599. Please keep the shipping container and packing materials. *In the unlikely event that you need to return G-SPEED eS PRO to us for any reason, you must use the G-Tech shipping container. If the Product is returned damaged caused by improper packaging, the warranty will be void and liability will rest with the user.*

- G-SPEED eS PRO storage system
- 4 removable SATA drive modules (installed in unit)
- (2) disk module keys
- 2-meter mini-SAS cable
- AC Power cable
- Optional – G-Tech PCIe x8 RAID controller
- Configuration Utility & Installation CD

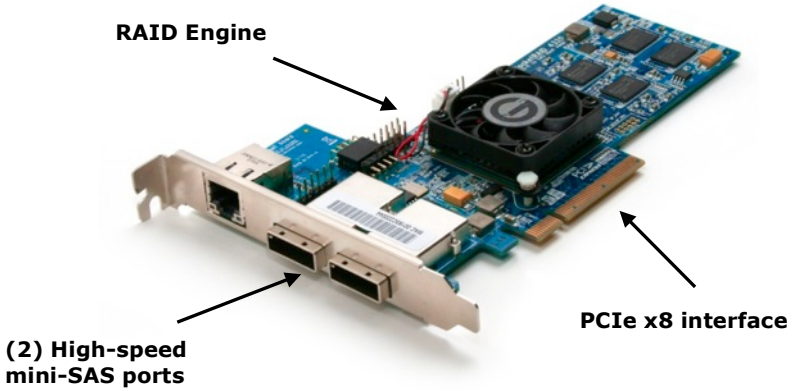
5. G-SPEED eS PRO Overview


(4) Removable Disk Drive Modules
Drive Module Power/Activity LED
Disk Module Lock Hole
Power Supply LED
Temperature/Fan RPM Warning LED



6. G-TECH PCIe x8 RAID CONTOLLER OVERVIEW

The G-Tech PCIe RAID controller connects G-SPEED eS PRO to any Mac PRO workstation and provides RAID 0, 1, 3, 6 & JBOD functionality.



6.1 Supported RAID Levels

G-SPEED eS PRO was shipped from the factory **configured in RAID 0 mode**. The controller also supports RAID 1, 3, 5, 6 and JBOD configurations. If you wish to change the RAID mode, please refer to Section 10. For an explanation of supported RAID levels, please refer to Appendix B.

G-SPEED eS PRO has been set up at the factory in RAID 0 mode. The controller also supports RAID 1, 3, 5, 6 and JBOD modes. Refer to Section 10 if you wish to change the mode of operation.

G-SPEED eS Pro sold before November 2011 are configured for use with the G-Tech PCIe RAID controller. Units purchased after this date are set up for use with the ATTO R680 RAID controller. See section 10 to configure units purchased after November 2001 for use with the G-Tech RAID controller.

7. G-SPEED eS PRO AUDIBLE ALARMS

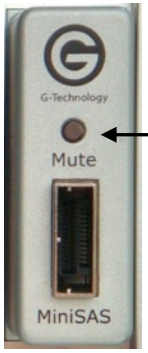
7.1 The G-SPEED eS PRO enclosure is equipped with an audible alarm that sounds when:

1. The internal temperature of the G-SPEED eS PRO enclosure reaches a temperature of 60° centigrade

and/or

2. When the main FAN fails or the RPM of the fan slows to a state where the fan can no longer adequately cool the system.

To silence the alarm, push the mute button located on the back of the G-SPEED eS PRO as shown below



Mute Button located on rear of unit

In addition to the audible alarm, the Temperature/Fan Warning LED located on the front bezel of G-SPEED eS PRO will illuminate.

If you hear an audible alarm and see the RED warning LED on the front of G-SPEED eS PRO, stop using G-SPEED eS PRO immediately. Check to see if the fan is spinning and move the unit to a cooler location. If you require a new fan, contact G-Tech Support for a replacement.

7.2 The G-Tech RAID controller is also equipped with an audible alarm that sounds when:

1. A disk drive failure occurs

or

2. When the G-SPEED eS PRO is removed from the RAID controller without first selecting “Unplug” in the Array Maintenance menu in the web GUI.

If you hear an audible alarm coming from the G-Tech RAID controller, see Section 12 “What to do in the Event of a Disk Drive Failure”. See Appendix A.2 for information on the proper way to hot “Unplug” G-SPEED eS PRO.

8. SETTING UP G-SPEED eS PRO WITH THE G-TECH PCIe RAID CONTROLLER

G-SPEED eS PRO comes pre-configured in RAID 0 mode and formatted for MAC OS X. Connecting G-SPEED eS PRO to your Mac PRO and configuring your system takes just a few steps as outlined below.

8.1 Installing the G-Tech PCIe RAID Controller

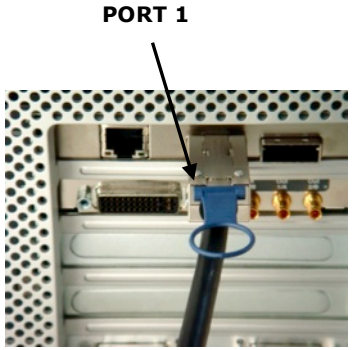
1. Install the G-Tech RAID controller into SLOT 4 (top slot) of your Mac PRO workstation.
2. Secure the RAID controller in place.

NOTE: If you are using an AJA, Blackmagic Design or equivalent video capture card, install it in SLOT 3 unless otherwise instructed by the card vendor.

8.2 Attaching G-SPEED eS PRO to the G-TECH RAID Controller

1. Attach one end of the supplied mini-SAS cable to the mini-SAS port located on the back of G-SPEED eS PRO.

2. Attach the other end of the mini-SAS cable to Port 1 (leftmost port) on the G-Tech RAID controller as shown below.



3. Attach the power cord to the back of G-SPEED eS PRO and connect the other end to AC power.

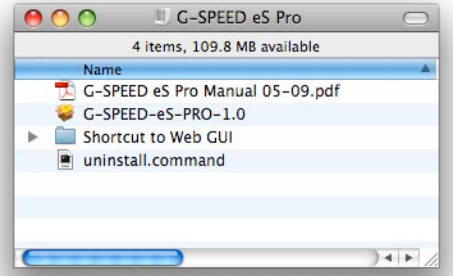
4. Power on G-SPEED eS PRO.

8.3 Loading the G-Tech PCIe RAID Controller Software

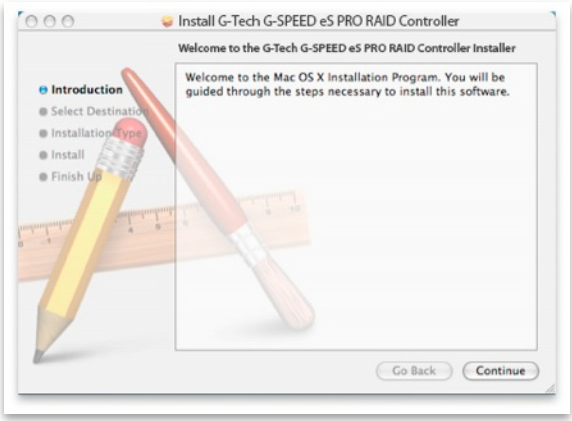
Check for software updates at http://www.g-technology.com/Support/
If you are upgrading software you must un-install the previous version first. See section 8.4 for details

1. Double-click on the G-SPEED eS PRO icon located in the "Manuals-Drivers" folder on the included CD as shown below.

2. Double-click on the "G-Tech RAID Controller" installer package as shown below.



3. The following window will appear. Follow the instructions to load the software.


Install G-Tech G-SPEED eS PRO RAID Controller
Welcome to the G-Tech G-SPEED eS PRO RAID Controller Installer
Introduction
Select Destination
Installation Type
Install
Finish Up
Welcome to the Mac OS X Installation Program. You will be guided through the steps necessary to install this software.
Go Back
Continue

4. After restarting your system, the G-SPEED eS PRO will mount on your desktop.

Your G-SPEED eS PRO is shipped from the factory in RAID 0 mode. The G-Tech RAID controller also supports RAID 1, 3, 5, 6 and JBOD modes. Refer to Section 10 below if you wish to change the mode of operation.

8.4 Uninstalling the G-Tech PCIe RAID Controller Software

1. Double-click on the uninstall.command file located in the "Manuals-Drivers/G-SPEED es Proz" folder on the included CD as shown above.

2. A Terminal window will open and you may be prompted to enter your password to delete the installed driver and web GUI.

Note: See appendix A.4.5 for instructions on changing password

9. G-TECH RAID CONTROLLER WEB GUI

The G-Tech RAID controller web GUI is used to configure and monitor the G-SPEED eS PRO system. The GUI is accessed using any web browser such as Safari, Internet Explorer or equivalent.

9.1 Accessing the G-Tech PCIe RAID Controller Web GUI

1. Open your web browser and enter the following address:

http://localhost:7412

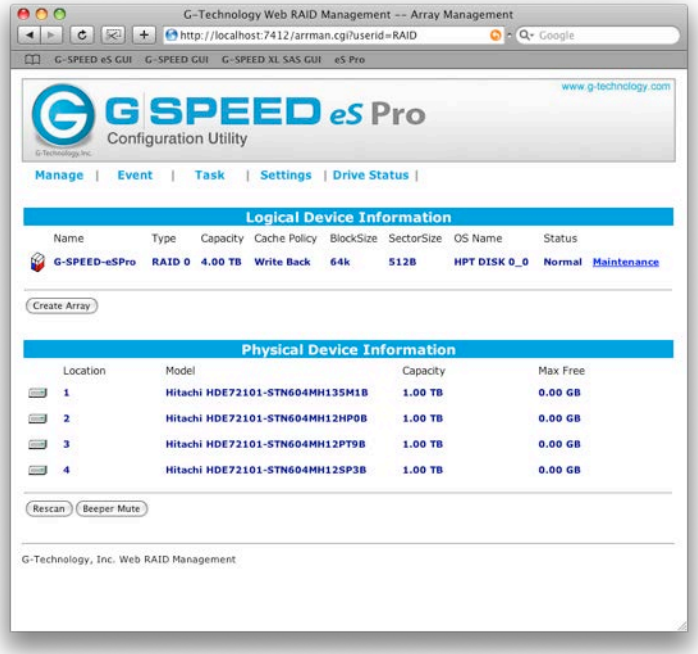
NOTE: A shortcut has been provided to access the web GUI. Drag the "G-SPEED eS PRO Web GUI" file (located in the folder Manuals-Drivers\G-SPEED eS Pro\Shortcut to Web GUI) to your Documents folder. Drag the file from the Documents folder to the dock as shown below. Click on the icon to access the web GUI.

2. The following will appear in your browser window. Enter "**admin**" as the User Name and "**0000**" (four zeros) as the Password and click on the <Login> button.

To view this page, you need to log in to area "G-Technology Web RAID Management" on localhost:7412.
Your log-in information will be sent securely.
Name: admin
Password: ••••
Remember this password in my keychain
Cancel
Log In

Note: See appendix A.4.5 for instructions on changing the password

3. The main screen of the web GUI will appear as shown below. Note that the G-SPEED eS PRO is set up as a RAID 0. Each of the four drives in the unit are displayed in the lower Section of the GUI.


G-Technology Web RAID Management -- Array Management
http://localhost:7412/arrman.cgi?userid=RAID
G-SPEED eS GUI
G-SPEED GUI
G-SPEED XL SAS GUI
eS Pro
www.g-technology.com
G SPEED eS Pro
Configuration Utility
Manage | Event | Task | Settings | Drive Status |
Logical Device Information
Name Type Capacity Cache Policy BlockSize SectorSize OS Name Status
G-SPEED-eSPro RAID 0 4.00 TB Write Back 64k 512B HPT DISK 0_0 Normal Maintenance
Create Array
Physical Device Information
Location Model Capacity Max Free
1 Hitachi HDE72101-STN604MH135M1B 1.00 TB 0.00 GB
2 Hitachi HDE72101-STN604MH12HP0B 1.00 TB 0.00 GB
3 Hitachi HDE72101-STN604MH12PT9B 1.00 TB 0.00 GB
4 Hitachi HDE72101-STN604MH12SP3B 1.00 TB 0.00 GB
Rescan
Beeper Mute
G-Technology, Inc. Web RAID Management

NOTE: Please refer to APPENDIX A for detailed information on the features of the G-Tech RAID Controller web GUI.

10. CHANGING THE G-TECH RAID CONTOLLER MODE

NOTE: G-SPEED eS Pro purchased after November 2011 will not be setup at the factory for use with the G-Tech PCIe RAID controller and will not be mounted on the desktop as shown in the following steps. To configure the unit for use with the G-Tech RAID controller skip to Step 5

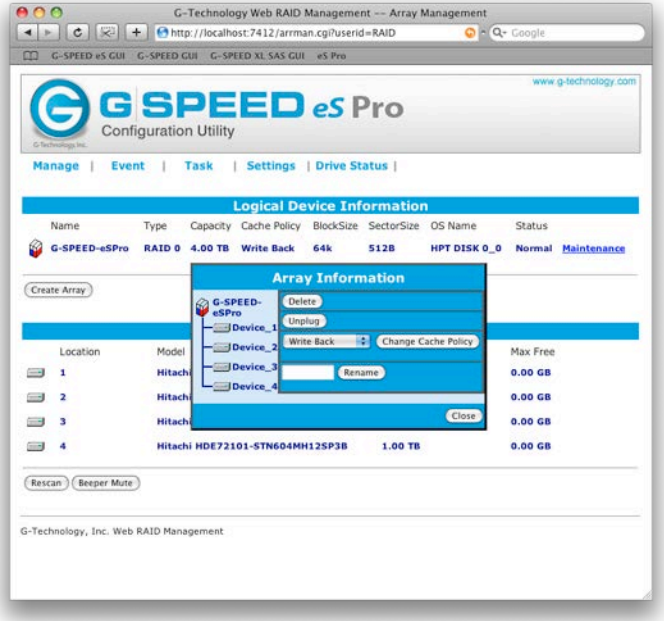
The G-SPEED eS PRO/G-Tech RAID controller combination is configured at the factory in RAID 0 mode. RAID 1, 3, 5, 6 and JBOD modes are also available. The web GUI is used to change the mode of operation. Follow the directions below to change modes.

10.1 Changing from RAID 0 to RAID 5

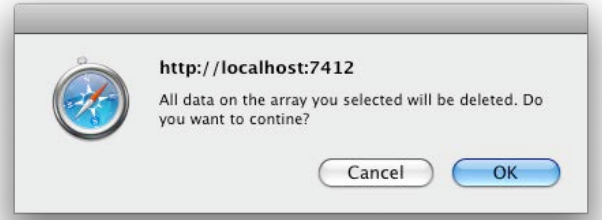
1. Unmount G-SPEED eS PRO by dragging the icon to the trash.

2. Launch the G-Tech RAID Controller web GUI.

3. Click on the “Maintenance” Link. The window shown below will appear.

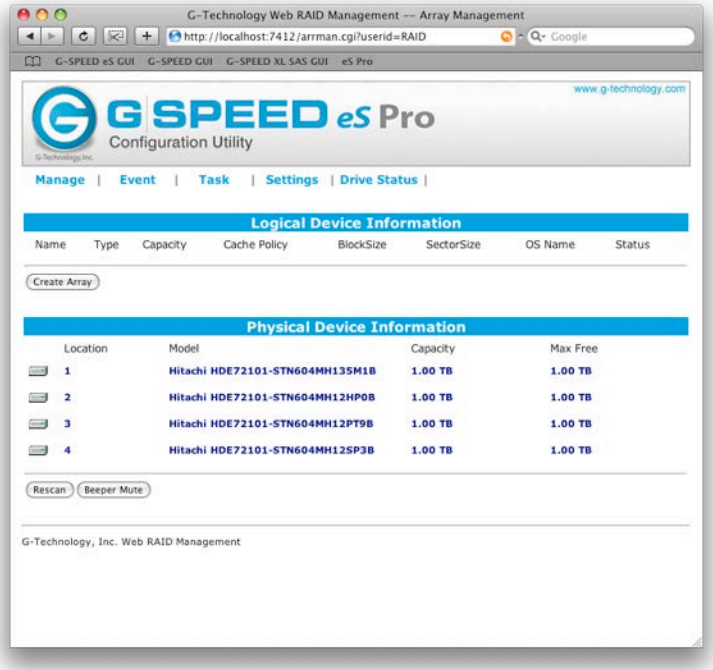


4. Click on the <DELETE> button. The following window will appear. Click the <OK> button to proceed.



WARNING: This will delete any data stored on G-SPEED eS PRO!

5. The GUI will refresh and the array is now deleted.


G-Technology Web RAID Management -- Array Management
http://localhost:7412/arrman.cgi?userid=RAID
G-SPEED eS GUI G-SPEED GUI G-SPEED XL SAS GUI eS Pro
www.g-technology.com
G SPEED eS Pro
Configuration Utility
Manage | Event | Task | Settings | Drive Status |
Logical Device Information
Name Type Capacity Cache Policy BlockSize SectorSize OS Name Status
Create Array
Physical Device Information
Location Model Capacity Max Free
1 Hitachi HDE72101-STN604MH135M1B 1.00 TB 1.00 TB
2 Hitachi HDE72101-STN604MH12HP0B 1.00 TB 1.00 TB
3 Hitachi HDE72101-STN604MH12PT9B 1.00 TB 1.00 TB
4 Hitachi HDE72101-STN604MH12SP3B 1.00 TB 1.00 TB
Rescan Beeper Mute
G-Technology, Inc. Web RAID Management

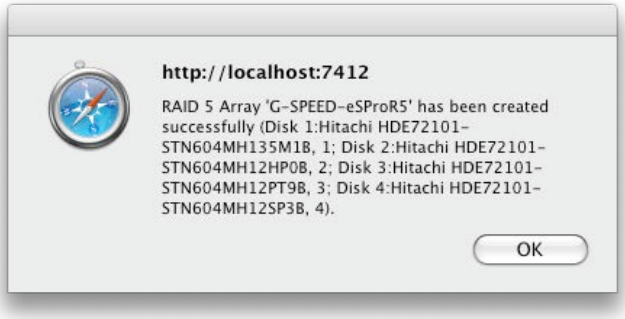
6. Click the <Create Array> button. The "Create Array" window will appear.

7. Select your desired RAID level (in this example **RAID 5**) for "Array Type:", enter **G-SPEED eS PRO-R5** for "Array Name:", select **Foreground** and **Write Back** for "Initialization Method:" and "Cache Policy:" respectively and click the <Select All> button.

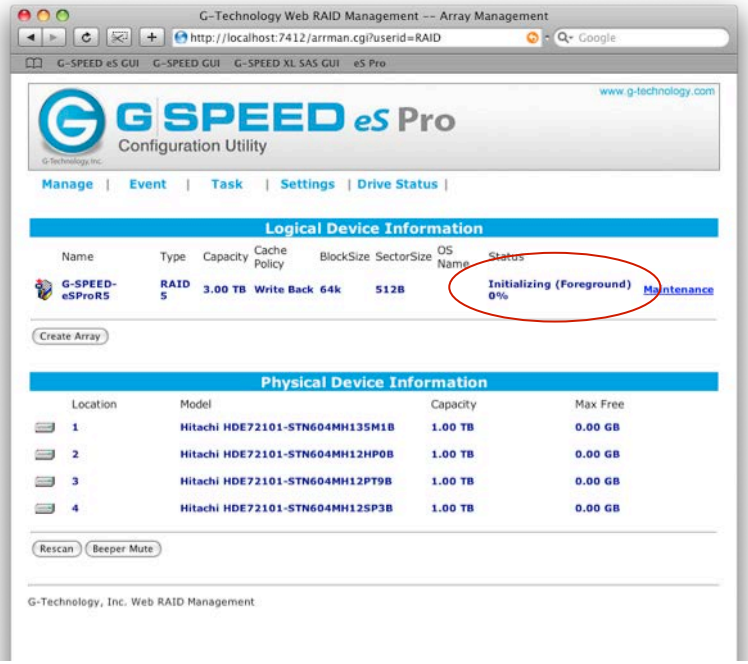
G-Technology Web RAID Management -- Create Array
http://localhost:7412/arrman.cgi?func=ShowCreate&userid=R
G-SPEED eS GUI G-SPEED GUI G-SPEED XL SAS GUI eS Pro
www.g-technology.com
G SPEED eS Pro
Configuration Utility
Manage | Event | Task | Settings | Drive Status |
Create Array
Array Type: RAID 5
Array Name: G-SPEED-eSPro
Initialization Method: Foreground
Cache Policy: Write Back
Block Size: 64K
Number of RAID5 member disks:
Select All
Location Model Capacity Max Free
Available Disks:
1 Hitachi HDE72101-STN604MH135M1B 1.00 TB 1.00 TB
2 Hitachi HDE72101-STN604MH12HP0B 1.00 TB 1.00 TB
3 Hitachi HDE72101-STN604MH12PT9B 1.00 TB 1.00 TB
4 Hitachi HDE72101-STN604MH12SP3B 1.00 TB 1.00 TB
Capacity:(According to the max free space on the selected disks) Maximum (MB)
Sector Size: 512B
Create
G-Technology, Inc. Web RAID Management

NOTE: In this example we are creating a RAID 5. The system can also be set up in RAID 1, 3, 6 or JBOD mode by selecting the appropriate setting in the "Array Type:" pull-down menu.

8. Click the <Create> button. The following window will appear.

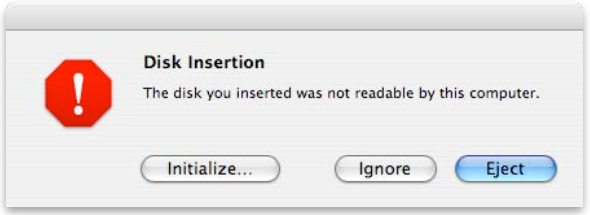

http://localhost:7412
RAID 5 Array 'G-SPEED-eSProR5' has been created successfully (Disk 1:Hitachi HDE72101-STN604MH135M1B, 1; Disk 2:Hitachi HDE72101-STN604MH12HP0B, 2; Disk 3:Hitachi HDE72101-STN604MH12PT9B, 3; Disk 4:Hitachi HDE72101-STN604MH12SP3B, 4).
OK

9. Click the <OK> button. The following window will appear. The GUI will indicate that the G-SPEED eS PRO is initializing.



10. The RAID 5 initialization process takes approximately one hour per TB of final capacity. Once the initialization process is complete, the GUI will indicate "Type" as **RAID 5** and "Status" as **Normal** .

11. The Mac OS will display the "Disk Insertion" window indicating the G-SPEED eS PRO is now ready to be initialized. Click on the <Initialize> button to launch the Apple Disk Utility and refer to your system documentation for instructions.

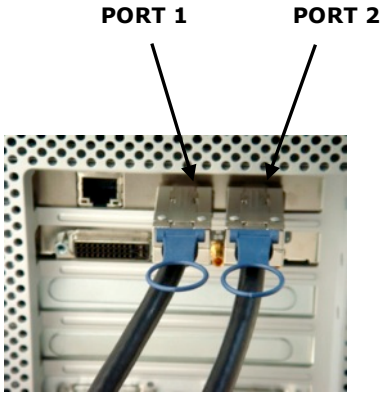


11. CONFIGURING TWO G-SPEED eS PRO UNITS IN RAID 5 MODE

Each G-SPEED eS PRO unit is configured at the factory with the G-Tech RAID controller in RAID 0 mode. RAID 1, 3, 5 , 6 and JBOD modes are also available. The web GUI is used to change the mode of operation. Follow the directions below to configure two G-SPEED eS PRO arrays in RAID 5 mode using the G-Tech RAID controller.

1. Ensure that the G-Tech RAID controller is properly installed and the driver and web GUI are loaded

2. Attach both G-SPEED eS PRO units to the G-Tech RAID controller as shown below, power the units and restart your computer.



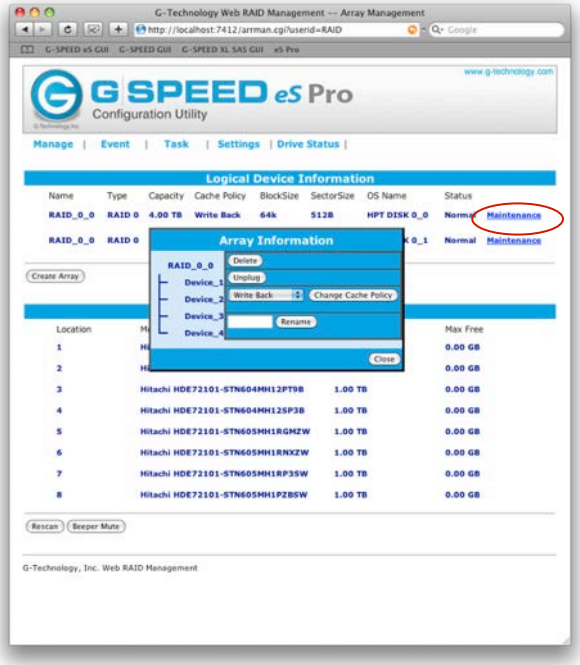
3. Both systems will mount to the desktop.

4. Unmount both G-SPEED eS PRO units by dragging the icons to the trash.

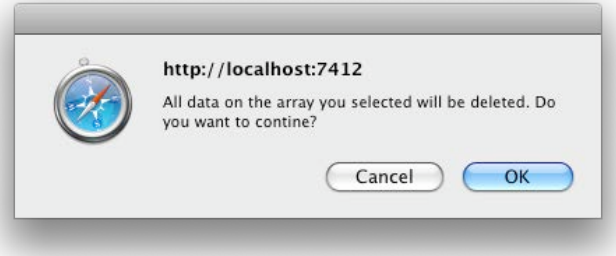
5. Launch the G-Tech RAID Controller web GUI. With the two units attached to the G-Tech RAID controller, the GUI will display information like that shown below.

G-Technology Web RAID Management — Array Management
G SPEED eS Pro
Configuration Utility
Manage | Event | Task | Settings | Drive Status
Logical Device Information
Physical Device Information
G-Technology, Inc. Web RAID Management

6. Click on the “Maintenance” link next to the array with “OS Name” HP Disk 0_0. The window shown below will appear.



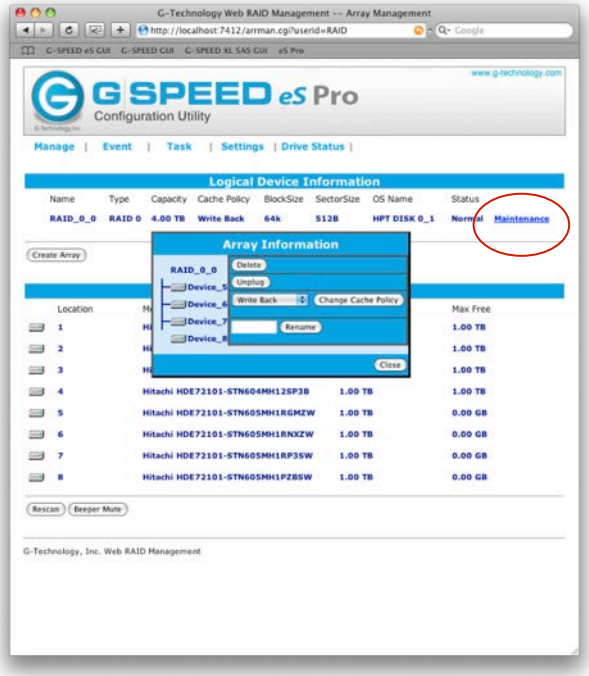
7. Click the <Delete> button. The following window will appear.



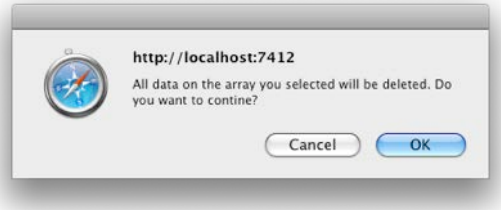
WARNING: This will delete any data stored on G-SPEED eS PRO!

8. Click the <OK> button to delete the array.

9. Click on the “Maintenance” link next to the array with “OS Name” HP Disk 0_1. The window below will appear.

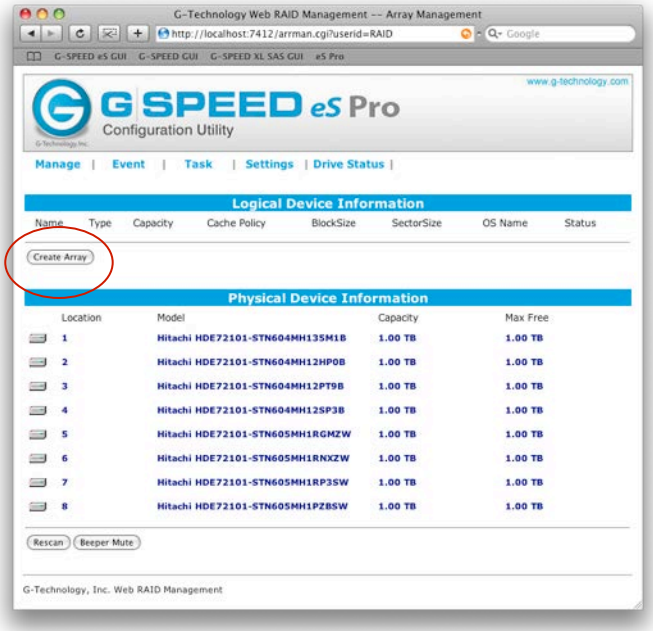


10. Click the <Delete> button and the following window will appear.

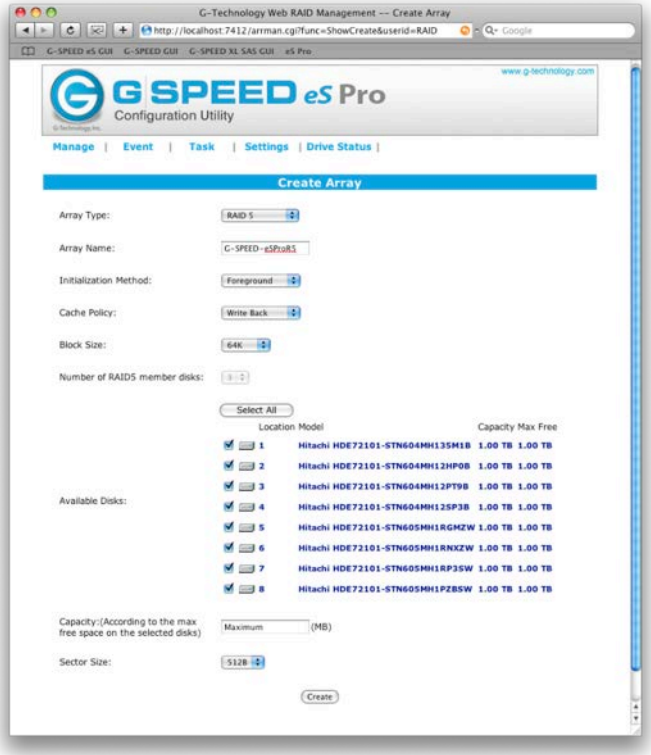


WARNING: This will delete any data stored on G-SPEED eS PRO!

11. Click the <OK> button to delete the array. Both arrays have now been deleted as shown below.

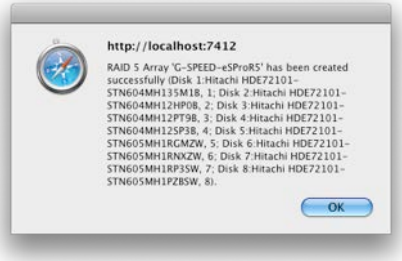

G-Technology Web RAID Management -- Array Management
G SPEED eS Pro
Configuration Utility
Manage | Event | Task | Settings | Drive Status |
Logical Device Information
Name Type Capacity Cache Policy BlockSize SectorSize OS Name Status
Create Array
Physical Device Information
Location Model Capacity Max Free
1 Hitachi HDE72101-STN604MH135M1B 1.00 TB 1.00 TB
2 Hitachi HDE72101-STN604MH12HP0B 1.00 TB 1.00 TB
3 Hitachi HDE72101-STN604MH12PT9B 1.00 TB 1.00 TB
4 Hitachi HDE72101-STN604MH12SP3B 1.00 TB 1.00 TB
5 Hitachi HDE72101-STN605MH1RGMZW 1.00 TB 1.00 TB
6 Hitachi HDE72101-STN605MH1RNXZW 1.00 TB 1.00 TB
7 Hitachi HDE72101-STN605MH1RP3SW 1.00 TB 1.00 TB
8 Hitachi HDE72101-STN605MH1PZBSW 1.00 TB 1.00 TB
Rescan
Beeper Mute
G-Technology, Inc. Web RAID Management

12. Click the <Create Array> button. The “Create Array” window will appear.

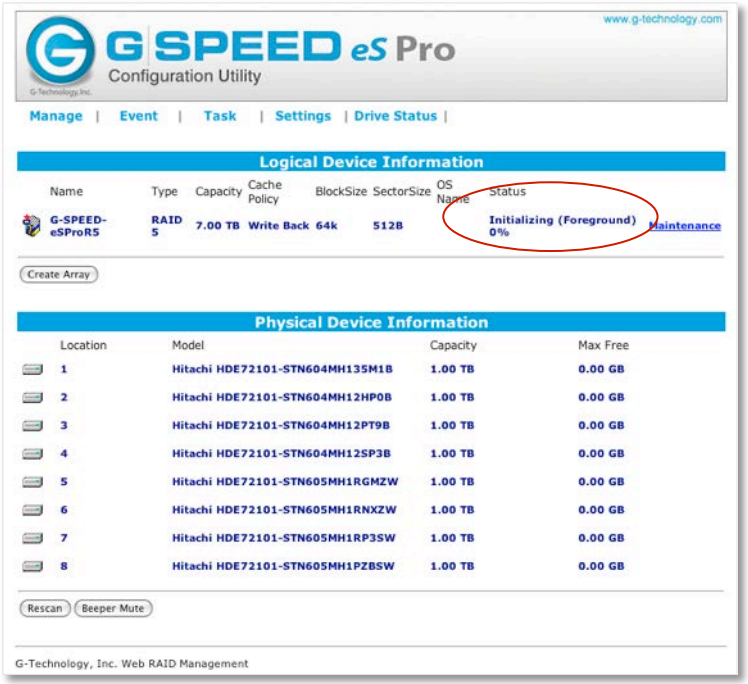


13. Select **RAID 5** for "Array Type:", enter **G-SPEED-eS PRO-R5** for "Array Name:", select **Foreground** and **Write Back** for "Initialization Method:" and "Cache Policy:" respectively and click the <Select All> button then Click the <Create> button.

14. The following window will appear.

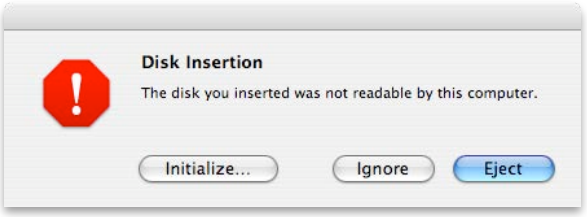

http://localhost:7412
RAID 5 Array 'G-SPEED-eSProR5' has been created successfully (Disk 1:Hitachi HDE72101-STN604MH135M1B, 1; Disk 2:Hitachi HDE72101-STN604MH12HP0B, 2; Disk 3:Hitachi HDE72101-STN604MH12PT9B, 3; Disk 4:Hitachi HDE72101-STN604MH12SP3B, 4; Disk 5:Hitachi HDE72101-STN605MH1RGMZW, 5; Disk 6:Hitachi HDE72101-STN605MH1RNXZW, 6; Disk 7:Hitachi HDE72101-STN605MH1RP3SW, 7; Disk 8:Hitachi HDE72101-STN605MH1PZBSW, 8).
OK

15. Click the <OK> button. The following window will appear to indicate that the G-SPEED eS PRO is initializing.


G SPEED eS Pro
Configuration Utility
www.g-technology.com
Manage | Event | Task | Settings | Drive Status |
Logical Device Information
Name Type Capacity Cache Policy BlockSize SectorSize OS Name Status
G-SPEED-eSProR5 RAID 5 7.00 TB Write Back 64k 512B Initializing (Foreground) 0% Maintenance
Create Array
Physical Device Information
Location Model Capacity Max Free
1 Hitachi HDE72101-STN604MH135M1B 1.00 TB 0.00 GB
2 Hitachi HDE72101-STN604MH12HP0B 1.00 TB 0.00 GB
3 Hitachi HDE72101-STN604MH12PT9B 1.00 TB 0.00 GB
4 Hitachi HDE72101-STN604MH12SP3B 1.00 TB 0.00 GB
5 Hitachi HDE72101-STN605MH1RGMZW 1.00 TB 0.00 GB
6 Hitachi HDE72101-STN605MH1RNXZW 1.00 TB 0.00 GB
7 Hitachi HDE72101-STN605MH1RP3SW 1.00 TB 0.00 GB
8 Hitachi HDE72101-STN605MH1PZBSW 1.00 TB 0.00 GB
Rescan
Beeper Mute
G-Technology, Inc. Web RAID Management

16. The RAID 5 initialization process takes approximately one hour per TB of final capacity. Once the initialization process is complete, the GUI will indicate "Type" as **RAID 5** and "Status" as **Normal**.

17. The Mac OS will display the "Disk Insertion" window indicating the G-SPEED eS PRO is now ready to be initialized. Click on the <Initialize> button to launch the Apple Disk Utility and refer to your system documentation for instructions.



12. WHAT TO DO IN THE EVENT OF A DISK DRIVE FAILURE

The G-Tech RAID controller continually monitors the health of each of the disk drives in G-SPEED eS PRO. In the event of a disk failure, an audible alarm will sound. The web GUI will also report the failed drive and its physical position.

NOTE: If G-SPEED eS PRO was configured in a protected RAID mode (RAID 1, 3, or 5), a drive failure does not result in data loss. However, the array is now in an unprotected state and the failed drive should be replaced as soon as possible to avoid data loss.

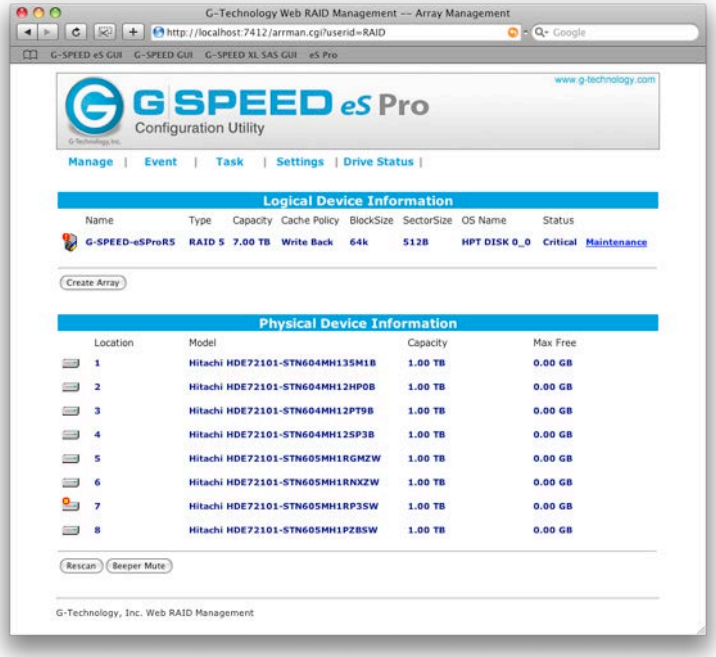
NOTE: If G-SPEED eS PRO was configured in RAID 6 mode, up to two drives can fail with no loss of data. Replace any failed drive as soon as possible.

Follow the steps below to identify and replace a failed drive.

1. Launch the web GUI.

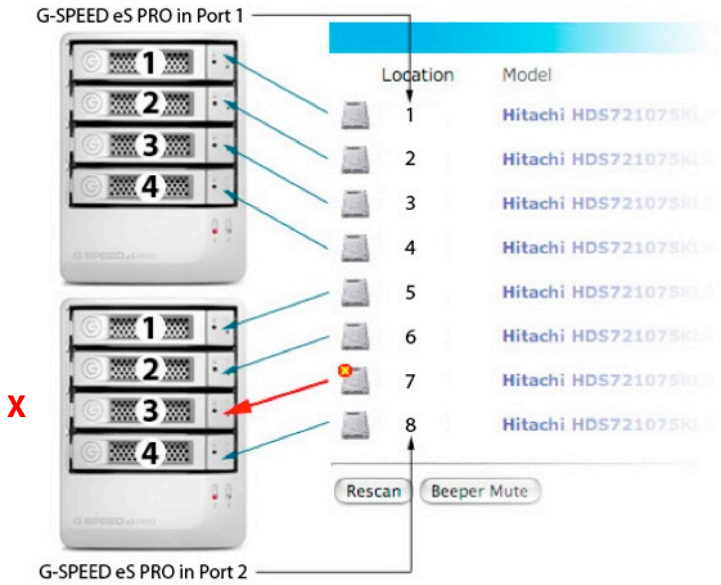
2. Mute the alarm by clicking on the <Beeper Mute> button.

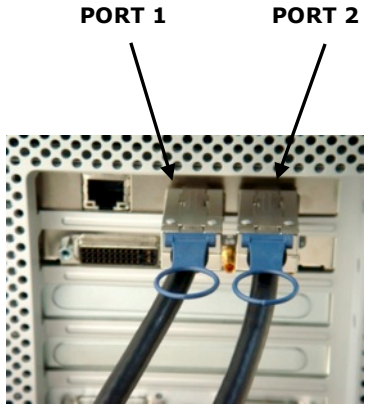
The GUI will display information like that shown below. An exclamation mark on the G-SPEED eS PRO icon indicates that the "Status" of the array is **Critical**. The lower portion of the GUI indicates which drive in which G-SPEED eS PRO unit has failed.


G-Technology Web RAID Management -- Array Management
G-SPEED eS Pro
Configuration Utility
Manage | Event | Task | Settings | Drive Status |
Logical Device Information
Name Type Capacity Cache Policy BlockSize SectorSize OS Name Status
G-SPEED-eSProR5 RAID 5 7.00 TB Write Back 64k 512B HPT DISK 0_0 Critical Maintenance
Create Array
Physical Device Information
Location Model Capacity Max Free
1 Hitachi HDE72101-STN604MH135M1B 1.00 TB 0.00 GB
2 Hitachi HDE72101-STN604MH12HP0B 1.00 TB 0.00 GB
3 Hitachi HDE72101-STN604MH12PT9B 1.00 TB 0.00 GB
4 Hitachi HDE72101-STN604MH12SP3B 1.00 TB 0.00 GB
5 Hitachi HDE72101-STN605MH1RGMZW 1.00 TB 0.00 GB
6 Hitachi HDE72101-STN605MH1RNXZW 1.00 TB 0.00 GB
7 Hitachi HDE72101-STN605MH1RP3SW 1.00 TB 0.00 GB
8 Hitachi HDE72101-STN605MH1PZBSW 1.00 TB 0.00 GB
Rescan
Beeper Mute
G-Technology, Inc. Web RAID Management

In this example there are two G-SPEED eS PRO units connected to the G-Tech RAID controller. Drive 7 of the G-SPEED eS PRO connected to Port 2 of the G-Tech RAID controller has failed.

3. Remove the failed drive (In this example Drive 3, of the G-SPEED eS PRO connected to port 2 of the G-Tech RAID controller) by inserting the provided key in to the lock hole and gently sliding the drive module out of the enclosure.

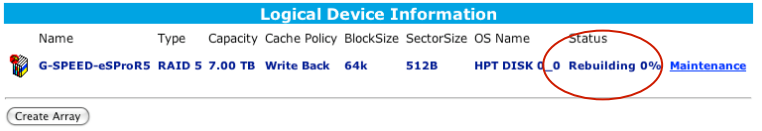




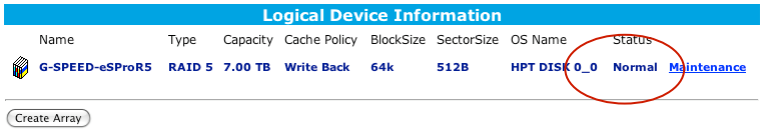
WARNING: Make absolutely sure that you remove the failed drive indicated by the GUI. If multiple G-SPEED eS PRO units are connected to the G-Tech RAID controller, it is a good idea to follow the cable to ensure you know which Port # the array is connected to on the RAID controller.

REMOVING THE WRONG DRIVE WILL RESULT IN THE LOSS OF THE ARRAY AND ALL OF THE CONTENT STORED ON G-SPEED eS PRO.

4. Replace the failed drive with a new disk module and secure in place. Once the drive has spun up to speed, the GUI will indicate that the array is rebuilding (The "Status" shows **Rebuilding** and the percentage complete) as shown below. The rebuild time is approximately 2 hours per TB.



5. Once the rebuild is complete, G-SPEED eS PRO is back to Normal and protecting your valuable data once again.



13. TECHNICAL SUPPORT

If you encounter any difficulties while installing G-SPEED eS PRO, please contact G-Tech Technical Support via one of the following:

Telephone: (310) 449-4599
Fax: (310) 449-4670
E-mail: support@g-technology.com
Internet: http://www.g-technology.com/support

When contacting Technical Support, make sure to be in front of your computer and have the following information readily available:

- Your G-SPEED eS PRO serial number (on bottom of unit)
- Operating system and version
- Computer brand and model
- Amount of memory installed
- Other devices attached to your computer

Thank you for purchasing G-SPEED eS PRO. If you have any comments or questions about this manual or the Product, please call (310) 449-4599, or send an email to info@g-technology.com.

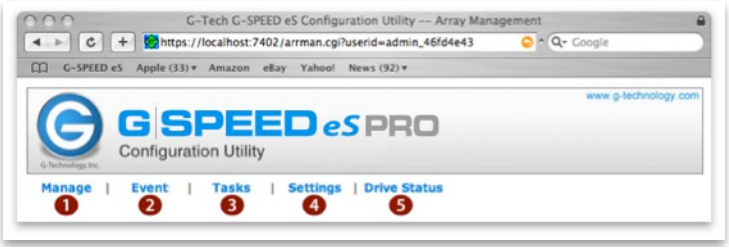
14. LIMITED WARRANTY

G-Technology by Hitachi warrants your Product against any defect in material and workmanship, under normal use, for the designated warranty period. If the Product should become defective within the warranty period, G-Tech, will at its discretion, repair or replace the Product. Repair or replacement parts or Products will be furnished on an exchange basis and will be either new or reconditioned. All replaced parts or Products shall become the Property of G-Tech. This warranty shall not apply if the Product has been damaged by accident, misuse, abuse or as a result of unauthorized service or parts. Warranty service is available to the purchaser by obtaining a Return Material Authorization number (RMA) and by delivering the Product during the warranty period to an authorized G-Tech service facility or to G-Tech. The purchaser shall bear all shipping, packing and insurance costs and all other costs, excluding parts and labor, necessary to effectuate repair, replacement or refund under this warranty. All returned Product must be shipped to G-Tech in the original shipping container.

For more information on how to obtain warranty service, an RMA number or to acquire shipping materials, contact G-Technology at 3528 Hayden Ave., Culver City, CA 90232, (310) 449-4599 or support@g-technology.com.

IN THE EVENT A PRODUCT BECOMES DEFECTIVE DURING THE WARRANTY PERIOD, THE PURCHASER'S EXCLUSIVE REMEDY SHALL BE REPAIR OR REPLACEMENT AS PROVIDED ABOVE. INCIDENTAL OR CONSEPROUENTAL DAMAGES, INCLUDING WITHOUT LIMITATION LOSS OF DATA, ARISING FROM BREACH OF ANY EXPRESS OR IMPLIED WARRANTY ARE NOT THE RESPONSIBILITY OF G-TECH AND, TO THE EXTENT PERMITTED BY LAW, ARE HEREBY EXCLUDED BOTH FOR PROPERTY DAMAGE, AND TO THE EXTENT NOT UNCONSCIONABLE, FOR PERSONAL INJURY DAMAGE.

APPENDIX A: WEB GUI



1. **Manage**:
   Array: This is the main screen of the G-SPEED eS PRO web GUI. G-SPEED eS is configured and monitored from this page. (See Appendix A.1 for details)
   Devices: Hard drive parameters are modified on this page (you should not make any changes on this page as the drives are configured for optimal performance with the G-SPEED eS PRO. Information about the RAID controller is displayed here and this page is also used to update the RAID firmware.
   Spare Pool: When configured in protected mode drives can be assigned to a "spare pool" (sometimes called hot spare). These drives will be automatically added to the Array in the event of a drive failure.

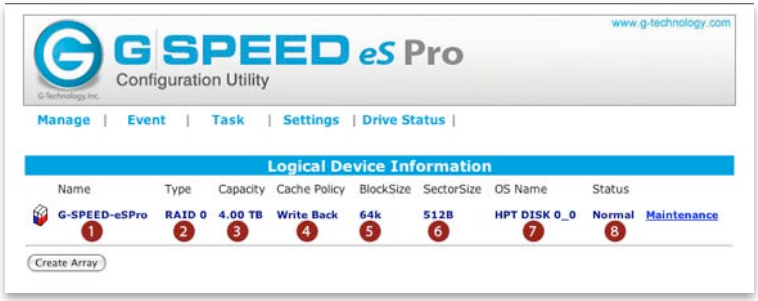
2. **Event**: All events of the G-SPEED eS PRO controller are recorded here, such as array changes and failures. These events can be emailed by setting up email notification under the "Settings" tab.

3. **Tasks**: Schedule the G-Tech controller to automatically verify the integrity of the RAID volume.

4. **Settings**: Configure the G-SPEED eS PRO controller settings such as login password and email notification. (See Appendix A.4 for details)

5. **Drive Status**: Check the status of all connected hard drives including detailed SMART data. The HDD Temperature Threshold adjusts the threshold of the hard drive temperature to trigger a warning email. Default is 140°F, and should not be changed.

A.1 Manage: Array



1. **Name**: Array name (as shown in GUI only).

2. **Type**: Displays RAID level of array.

3. **Capacity**: you guessed it… capacity of the array.

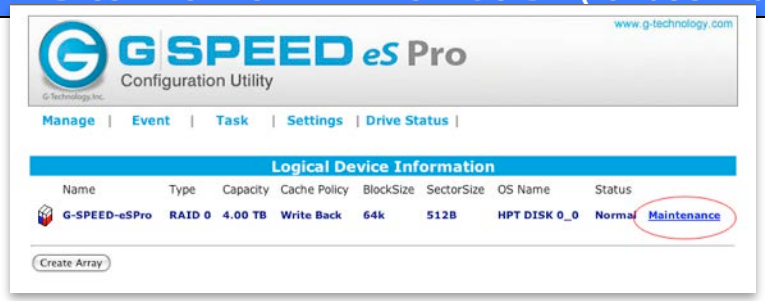
4. **Cache Policy**: Displays current write cache policy for RAID protected arrays. (for more info see appendix A.1.7.7)

5. **Block Size**: Displays current block size.

6. **Sector Size**: Displays current sector size.

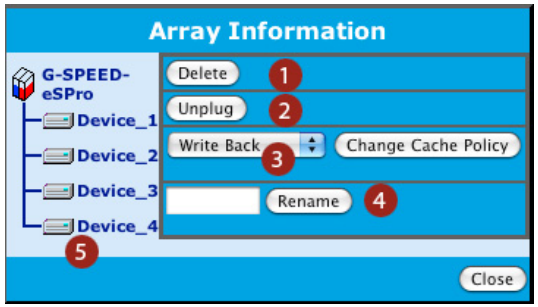
7. **OS Name**: Controller assigned name that will display in Disk Utility.

8. **Status**: Displays current status of array.
   Normal: All OK
   Critical: Drive failure has occurred
   Initializing: Building RAID 1, 3, 5, or 6 array
   Rebuilding: Parity data being reconstructed


G SPEED eS Pro
Configuration Utility
www.g-technology.com
Manage | Event | Task | Settings | Drive Status |
Logical Device Information
Name Type Capacity Cache Policy BlockSize SectorSize OS Name Status
G-SPEED-eSPro RAID 0 4.00 TB Write Back 64k 512B HPT DISK 0_0 Normal Maintenance
Create Array

A.2 Maintenance: Displays configuration and maintenance options for current array. The options differ depending on RAID level of the array.

RAID 0



1. **Delete**: Deletes current Array

WARNING: THIS OPERATION WILL DELETE THE ARRAY AND ALL DATA ON IT!!

2. **Unplug**: This will disconnect the Array from the controller. Be sure to unmount all volumes from the system before using this option. This enables G-SPEED eS PRO units to be unplugged from the system without causing an alarm.

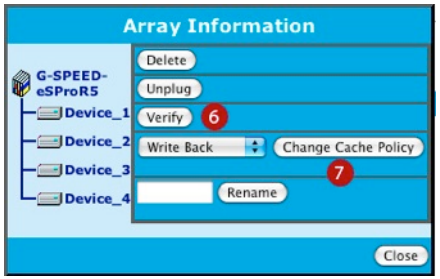
NOTE: While the controller is "hot pluggable," we recommend shutting the system down when connecting or disconnecting G-SPEED eS PRO from the controller.

3. **Change Cache Policy:**
   Write-back: Data written to the array is cached. This will result in higher performance, but data loss may occur in case of a power failure.
   Write-through: Data written to the array is always passed directly to the disks. Subsequent reads may still be completed from the cache, if appropriate.

4. **Rename**: Renames array as displayed in the GUI.

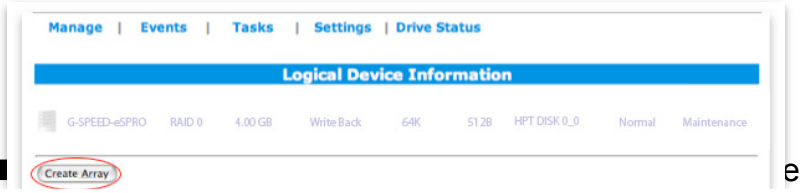
5. Shows the devices currently part of the Array, their location and status.

RAID 5

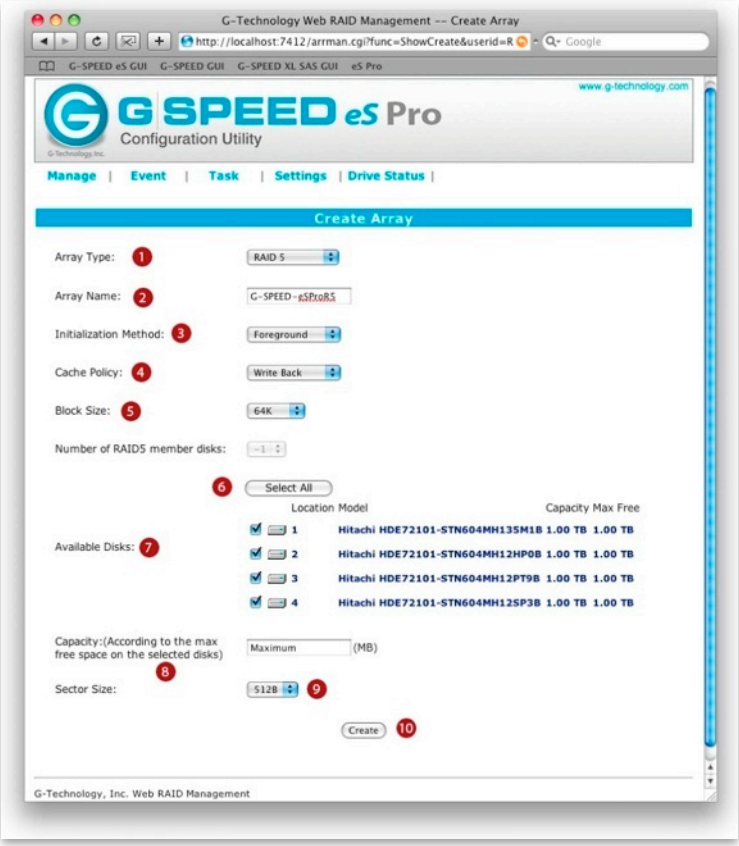


6. **Verify**: Verifies the integrity of the RAID set.

7. **Change Cache Policy**: (See A.2.3 Above)


Manage | Events | Tasks | Settings | Drive Status
Logical Device Information
G-SPEED-eSPRO RAID 0 4.00 GB Write Back 64K 512B HPT DISK 0_0 Normal Maintenance
Create Array

A.3 Create Array:
Click on “Create Array” and the following will appear.

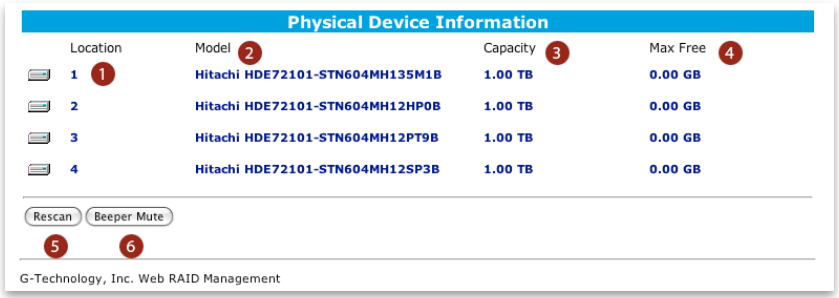


1. **Array Type**: select the RAID level for new array.
2. **Array Name**: This is the name that will be displayed in the MAIN page of the GUI.
3. **Initialization Method**: Sets the priority of the RAID creation process.

   Quick Init: Default for RAID 0 arrays. NOT recommended for creation of RAID 3, 5 or RAID 6 arrays.
   Foreground: All controller resources are used for the creation process and the array is not available until complete.
   Background: Minimal controller resources are used for the creation process and the array is available for immediate use.

   NOTE: RAID protection is not available until initialization is complete
4. **Cache Policy**: See section 7.3.
5. **Block Size**: Default = 64K.
6. **Select All**: Simple method to select all disks.
7. **Available Disks**: Displays disks currently available for array creation, showing location, drive model, serial number, size of the disk and current free capacity.
8. **Capacity**: Enter the desired capacity of the new array. Default is the Maximum capacity available.
9. **Create**: As expected, selecting this will begin the array creation process.

A.4 Physical Device Information:



1. **Location**: Shows the location of disks attached to the controller

2. **Model**: Displays the drive model and serial number of disks currently attached to the controller.

3. **Capacity**: Displays the advertised capacity of the disks currently attached to the controller.

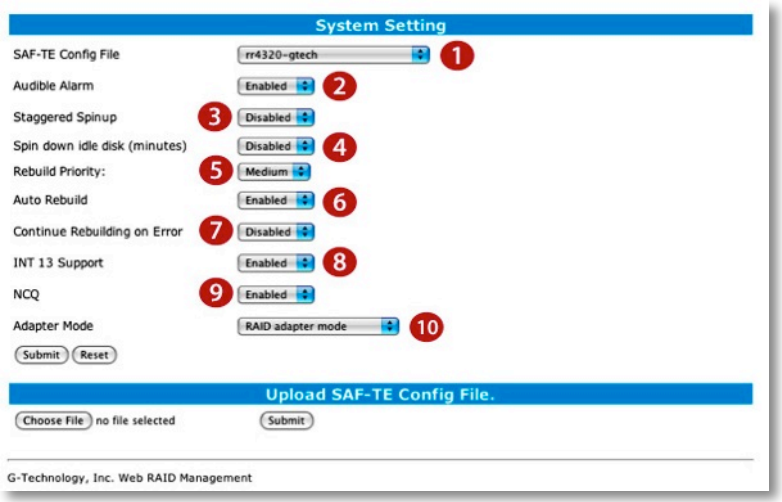
4. **Max Free**: Displays the maximum free capacity of the disks currently attached to the controller.

5. **Rescan**: Rescans the mini-SAS bus to detect any new devices attached.

6. **Beeper Mute**: Mutes audible beeper.

NOTE: Beeper will sound when a drive fails or an array is disconnected from the system without first selecting “Unplug” in the Array Maintenance menu.

1. **Settings**:
   System:



1. **SAF-TE Config File**: Not currently supported.

2. **Audible Alarm**: Enables or disables the audible alarm. Default = Enabled.

3. **Staggered Spinup**: Not currently supported. Default = Disabled.

4. **Spin down idle disk:** Not currently supported. Default = Disabled.

5. **Rebuild Priority:** Default = Medium

6. **Auto Rebuild**: Enables or disables the auto-rebuild feature. When enabled, a critical RAID 1, 3, 5 or RAID 6 array will automatically rebuild when a new drive is inserted. See Section 12. Default = Enabled.

7. **Continue Rebuilding on Error:** Default = Disabled

8. **INIT13 Support:** Default = Enabled.

Appendix A.4: Settings

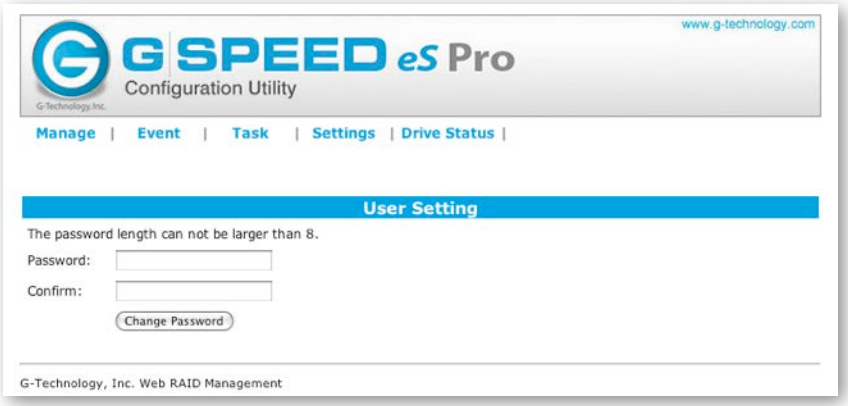
9. **NCQ:** Default = Enabled.

10. **Adapter Mode:** Default = RAID adapter mode.

2. Settings:

User:

Used to change the GUI password. Default = "0000"



3. Settings:

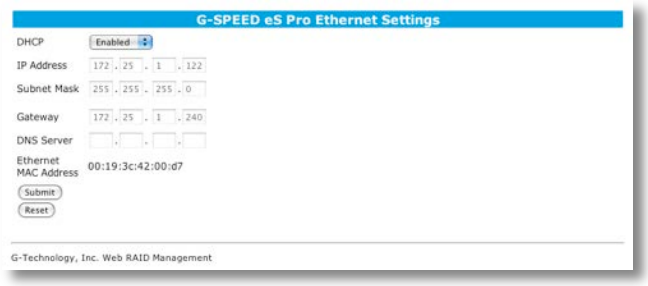
SNMP:

Not currently supported.

4. Settings:

Network:

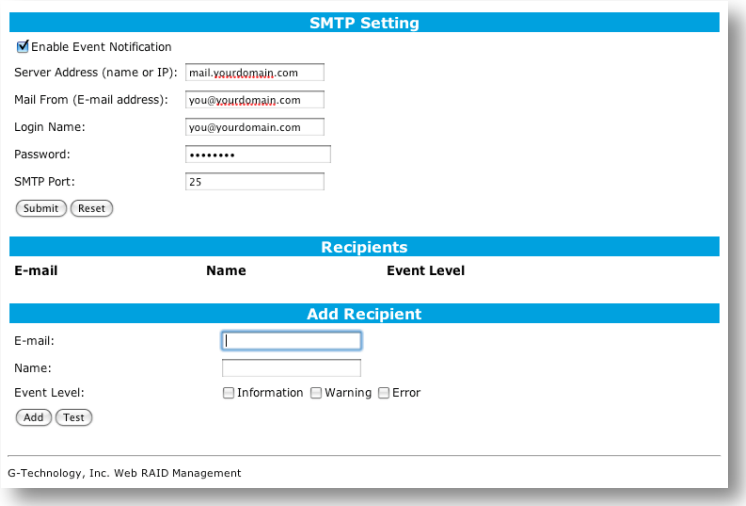
Enables G-SPEED eS Pro to be remotely monitored and configured. Attach a network cable to the ethernet connector on the G-Tech RAID controller and and restart your Mac. Enter the IP address in any web browser to access the web GUI.



5. Settings:

Email:

Enter your email information and password to enable mail notification in the event of a fault with G-SPEED eS Pro.



6. Settings:

NTP:

Not currently supported.

Appendix A.5: Drive Status

Displays the status of all connected hard drives including detailed SMART data. The HDD Temperature Threshold adjusts the threshold of the hard drive temperature to trigger a warning email. Default is 140°F, and should not be changed.

APPENDIX B: RAID levels explained

RAID Level	Description	Advantage	Disadvantage	Ideal For…
0	Disk striping	Offers the highest performance and a useable storage capacity of 100% of total available storage capacity	No fault tolerance - failure of one drive in the array results in complete data loss	Content creation applications requiring highest storage capacity
1	Mirroring	Maximum level of data protection as identical data is written to multiple drives	Useable storage space is 50% of total available capacity	Applications in which data security is paramount
5	Disk striping with distributed parity	High read performance, medium write performance with data protection in case of a drive failure.	Useable storage capacity equals total capacity of all drives in the array less the capacity of one drive. For example, a 4x 1TB RAID 5 yields a useable capacity of 3 TB. Disk failure results in drop in performance	Content creation applications requiring data protection
6	Disk striping with dual distributed parity	High read performance, medium write performance with data protection in case of up to two drive failures.	Useable storage capacity equals total capacity of all drives in the array less the capacity of two drives. For example, a 4x 1TB RAID 5 yields a useable capacity of 3 TB. Disk failure results in drop in performance	Content creation applications requiring data protection
JBOD	Just-a-bunch-of-disks	Each drive can be accessed as an individual volume. Useable storage capacity is 100% of total available storage.	No fault tolerance	Audio applications

APPENDIX C: Notes

When the G-Tech web GUI is open dropped frames may occur in editing applications such as Final Cut PRO. We recommend not having the GUI open while working in these programs.

Two G-SPEED eS PRO storage units can be attached to the G-Tech RAID controller for up to 8TB of capacity and over 600 MB/sec of performance.

Replacements / extra G-SPEED eS PRO disk modules are available for purchase online at:
www.g-technology.com/products/g-speed-es.cfm